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Notice of Allowability

Application No.

10/022,226

Examiner

Nema O. Berezny

Applicant(s)

HEDLER ET AL.

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to Amendment filed 12-14-04.
2. ☒ The allowed claim(s) is/are 1-14, 41, 42 and 44-47.
3. ☒ The drawings filed on 17 December 2001 are accepted by the Examiner.
4. ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 - a) ☒ All b) ☐ Some* c) ☐ None of the:
 1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

* Certified copies not received: _____.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.
THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

5. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
6. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
 - (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
 - 1) ☐ hereto or 2) ☐ to Paper No./Mail Date _____.
 - (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.

Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
7. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

- | | |
|--|--|
| 1. <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 5. <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 2. <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 6. <input type="checkbox"/> Interview Summary (PTO-413),
Paper No./Mail Date _____. |
| 3. <input checked="" type="checkbox"/> Information Disclosure Statements (PTO-1449 or PTO/SB/08),
Paper No./Mail Date <u>11242004</u> | 7. <input type="checkbox"/> Examiner's Amendment/Comment |
| 4. <input type="checkbox"/> Examiner's Comment Regarding Requirement for Deposit
of Biological Material | 8. <input checked="" type="checkbox"/> Examiner's Statement of Reasons for Allowance |
| | 9. <input type="checkbox"/> Other _____. |

DETAILED ACTION

This Office Action is in response to Applicant's Amendment filed 12-14-04, which has been entered and considered. Claims 1-42 and 44-47 are currently pending, with claims 15-40 withdrawn; cancellation of claim 43 is acknowledged.

Election/Restrictions

This application is in condition for allowance except for the presence of claims 15 to 40 non-elected without traverse. Accordingly, claims 15-40 been cancelled. Applicant requested a rejoinder of the process non-elected claims at the time an election was made. However, the process claims do not include all of the limitations of the allowable product claims and are therefore not eligible for rejoinder at this time under MPEP 821.04.

Allowable Subject Matter

The following is an examiner's statement of reasons for allowance for claims 1-14, 41-42, and 44-47:

The prior art of record does not teach or disclose or make obvious an electronic component, comprising inter alia: an insulative elevation formed on an electronic circuit surface which has a geometrical shape for achieving a spring effect in directions extending parallel to said circuit surface. Nolan (5,508,228) discloses an insulative elevation which achieves a spring effect in an orthogonal direction to the substrate surface, but is silent as to a parallel spring effect. Applicant's specification (p.18 lines 9-

20) discloses that the insulative elevation will be shaped such that a spring effect is achieved only in the parallel direction and will not have a spring effect orthogonal to the substrate surface. Therefore, it is concluded that Nolan will not have an elevation with a spring effect parallel to the substrate surface **[independent claim 1]**.

The prior art of record does not teach or disclose or make obvious an electronic circuit component, comprising inter alia: a conduction path disposed in the interior of an insulative elevation formed on an electronic circuit surface between at least one electrical contact and said electronic circuit. Nolan (5,508,228) discloses conductive paths in the interior of the entire bump structure (Fig.5h el.40, 36). However, said conductive paths are not disposed in the interior of the insulative portion (el.24) **[independent claim 8]**.

The prior art of record does not teach or disclose or make obvious an electronic circuit component, comprising inter alia: an insulative elevation disposed on an electronic circuit surface, an electrical contact disposed on said elevation, an insulation layer partially covering said elevation by leaving a side face of said elevation free of said insulation layer, and a conduction path disposed on at least part of said insulating layer. McMahon (6,075,712) discloses said component (Fig.2A), except there is no conduction path at least partly disposed on said insulating layer **[independent claim 42]**.

The prior art of record does not teach or disclose or make obvious an electronic circuit component, comprising inter alia: an insulative elevation formed on an electronic circuit surface comprising rough regions. Nolan (5,508,228) in view of Bunting (3,641,254) disclose a similar structure, but Bunting discloses a lead frame structure

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with a rough surface region. Examiner agrees with Applicant that Nolan would not be motivated to look to one such as Bunting **[independent claim 45]**.

This application is now in condition for allowance.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Conclusion

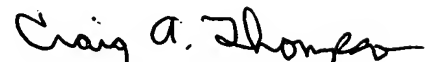
Any inquiry concerning this communication or earlier communications from the examiner should be directed to Nema O. Berezny whose telephone number is (571) 272-1686. The examiner can normally be reached on M-F 9-5:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Carl Whitehead, Jr. can be reached on (571) 272-1702. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

NB


CRAIG A. THOMPSON
PRIMARY EXAMINER